Amendments to the Claims

Please cancel claim 21.

Please amend claim 22.

Please add claims 25-27.

A complete listing of all claims in this application is set forth below. This listing will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (canceled).

2. (Previously presented) A system as claimed in claim 5, in which the marker rings are more reflective than the surface of the shaft on which they are arranged.

3. (Previously presented) A system as claimed in claim 5, in which there are at least three marker rings.

4. (Previously presented) A system as claimed in claim 3, in which the distance between a first ring and a second ring which is adjacent to the first ring is the same as the distance between the said second ring and a third ring which is adjacent to the second ring on the opposite side of the second ring from the first ring.

5. (Previously presented) A surgical instrument system, which comprises:

a. a drill bit including an elongate shaft which defines a drill bit axis, the shaft bearing a plurality of marker rings arranged in a predetermined pattern on the surface of the shaft,

b. at least two receiving devices which are spaced apart for receiving stereoscopic signals from the rings on the drill bit,

c. a data processor for analysing the signal from the rings and generating information relating to the position and orientation of the drill bit relative to the receiving device, and

d. a drive unit operable to rotate the drill bit about the drill bit axis.

6. (Previously presented) A system as claimed in claim 5, in which the planes defined by the axially spaced edges of each ring are parallel to one another and perpendicular to the drill bit axis.

7. (Previously presented) A system as claimed in claim 5, in which the rings are marked on a sleeve which is fitted to the surface of the drill bit.

8. (Previously presented) A surgical instrument system, which comprises:

a. a reamer including an elongate shaft which defines an axis, the shaft bearing a plurality of marker rings arranged in a predetermined pattern on the surface of the shaft,

b. at least two receiving devices which are spaced apart for receiving stereoscopic signals from the rings on the reamer, ~~and~~

c. a data processor for analysing the signal from the rings and generating information relating to the position and orientation of the reamer relative to the receiving device, and

a drive unit operable to rotate the reamer about the axis,

wherein the reamer is configured to cut a patient's tissue during rotation of the reamer about the axis.

Claim 9 (canceled).

Claim 10 (canceled).

Claim 11 (canceled).

12. (Previously presented) A system as claimed in claim 8, in which the marker rings are more reflective than the surface of the shaft on which they are arranged.

13. (Previously presented) A system as claimed in claim 8, in which there are at least three marker rings.

14. (Previously presented) A system as claimed in claim 13, in which the distance between a first ring and a second ring which is adjacent to the first ring is the same as the distance between the said second ring and a third ring which is adjacent to the second ring on the opposite side of the second ring from the first ring.

15. (Previously presented) A system as claimed in claim 8, in which the planes defined by the axially spaced edges of each ring are parallel to one another and perpendicular to the axis.

16. (Previously presented) A system as claimed in claim 8, in which the rings are marked on a sleeve which is fitted to the surface of the reamer.

Claim 17 (canceled).

Claim 18 (canceled).

19. (Previously presented) A surgical instrument system, which comprises:

a tool including an elongate shaft which defines a tool axis, the shaft bearing a plurality of marker rings arranged in a predetermined pattern on the surface of the shaft so that they extend around the tool axis,

at least two receiving devices which are spaced apart for receiving stereoscopic signals from the rings on the tool,

a data processor for analysing the signal from the rings and generating information relating to the position and orientation of the tool relative to the receiving device, and

a drive unit for imparting rotational motion to the tool,

wherein the tool is one of a drill bit and a reamer, and

wherein each of the drill bit and the reamer is configured to cut a patient's tissue when it is made to rotate as a result of the rotational motion imparted to it by the drive unit.

20. (Previously presented) A system as claimed in claim 19, in which the marker rings are more reflective than the surface of the shaft on which they are arranged.

21. (Canceled).

22. (Currently amended) A system as claimed in claim 21,

in which there are at least three marker rings, and

in which the distance between a first ring and a second ring which is adjacent to the first ring is the same as the distance between the said second ring and a third ring which is adjacent to the second ring on the opposite side of the second ring from the first ring.

23. (Previously presented) A system as claimed in claim 19, in which the planes defined by the axially spaced edges of each ring are parallel to one another and perpendicular to the tool axis.

24. (Previously presented) A system as claimed in claim 19, in which the rings are marked on a sleeve which is fitted to the surface of the tool.

25. (New) A system as claimed in claim 5,

in which a proximal portion of the drill bit bears the plurality of marker rings, and

in which a distal portion of the drill bit bears a cutting surface.

26. (New) A system as claimed in claim 8,

in which a proximal portion of the reamer bears the plurality of marker rings, and

in which a distal portion of the reamer bears a cutting surface.

27. (New) A system as claimed in claim 19,

in which a proximal portion of the tool bears the plurality of marker rings, and

in which a distal portion of the tool bears a cutting surface.